



# PRE-K LITERACY: PLANTS ARE ALL AROUND US!

## UNIT OVERVIEW

Students will explore plants, including their attributes and growth cycle, over the course of one month or longer. This interdisciplinary unit on plants consists of 4 sequences learning plans. Each activity or learning plan works best with a small group of 4-5 students over the course of one week. Duration of student engagement in tasks will vary, but the recommendation is of each activity is 20 minutes or less. This Common Core-aligned literacy task is to be used in correlation with the curriculum embedded common core aligned task for mathematics, How Many Little Seeds?

## TASK DETAILS

**Task Name:** Plants Are All Around Us!

**Grade:** Pre-K

**Subject:** Literacy

**Depth of Knowledge:** 3

**Task Description:** Students observe plants in their neighborhood and classroom and discover how books provide factual information about real life things, like plants.

**Standards:**

**PK.RI.1** With prompting and support, ask and answer questions about details in a text.

**PK.RI.10** With prompting and support, actively engage in group.

**PK.W.2** With prompting and support, use a combination of drawing, dictating, or writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

**Materials Needed:**

- From Seed to Plant by Gail Gibbons
- Paper
- Crayons
- Markers
- Pencils
- Cameras for documentation
- Teacher recording materials



## TABLE OF CONTENTS

The task and instructional supports in the following pages are designed to help educators understand and implement tasks that are embedded in Common Core-aligned curricula. While the focus for the 2011-2012 Instructional Expectations is on engaging students in Common Core-aligned culminating tasks, it is imperative that the tasks are embedded in units of study that are also aligned to the new standards. Rather than asking teachers introduce a task into the semester without context, this work is intended to encourage analysis of student and teacher work to understand what alignment looks like. We have learned through the 2010-2011 Common Core pilots that beginning with rigorous assessments drives significant shifts in curriculum and pedagogy. Universal Design for Learning (UDL) support is included to ensure multiple entry points for all learners, including students with disabilities and English language learners.

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# PRE-K LITERACY: PLANTS ARE ALL AROUND US!

## TASK ADMINISTRATION DETAILS

This section includes guidelines to implement a culminating Common Core-aligned literacy task based on the unit *Plants*. These guidelines include how to prepare students for a unit on plants, steps to administer a read aloud and writing task, additional supports for students, a student writing template and a teacher record template.

**Pre-K Literacy: Plants Are All Around Us!**  
**Task Administration Details**

## How Plants Grow

### Literacy – Reading and Writing

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#### GUIDELINES FOR ADMINISTERING THE TASK

**Objective:** The purpose of this task is to encourage a written response (a combination of drawing, writing, and dictating) to informational texts through group activities and with prompting and support.

**Estimated Time:** 15-20 minute time blocks across 3-5 days.

#### Set-up

- Suggested implementation is a whole group read aloud followed by a small group, centers-based read aloud.
- It's recommended that teachers re-read the story at least once to each student individually or in small groups before prompting them to respond on paper.

#### Materials

Informational Text: From Seed to Plant by Gail Gibbons

Writing Response Materials:

- A variety of crayons, markers, and other writing tools.
- Choices of large and small paper, blank sheets, and the written response template.
- Chart paper, blank or with Know-Wonder-Learn (K-W-L) columns.

Additional Materials

- A variety of seeds
- Specimen jars
- Magnifying glasses
- Clipboards with paper

## Pre-K Literacy: Plants Are All Around Us!

### Task Administration Details

#### Key Words/Vocabulary

Illustrate how to use the following key words during small group read alouds, discussions, and other activities throughout this unit of study on plants. You may want to create a classroom display with pictures illustrating some vocabulary words from the text.

The following words can be found directly in the text, From Seed to Plant. Using authentic experiences, you may want to prepare students with some new vocabulary that they'll encounter in the text. However, students are not expected to memorize or acquire a working knowledge of all of these words.

#### Tier 1

Seed, plant, flower, ground, food, sun, warms, wind, bees, insects, birds, animals, eat, water, dirt, sun, rain, food, fruit, vegetable, sunshine, air, leaves

#### Tier 2

Grow, ripens, roots, buds, soil, acorns, scatter, shoots, blows, falls, floats, lands, blows, soaks, softens, drops, streams, ponds, rivers, ocean, travel, shore, flower bed, vegetable garden, small envelopes or boxes; Parts of a plant: petal, flower, fruit, bud, leaves, root, berries

#### Tier 3

Botanists, nectar, pollen grain, pod, minerals, vitamins, nutrition, hooks, daisy, rose, tulip, pea, buttercup, tomato, squash, violet, corn, sunflower, oak tree, hummingbirds, apple tree, zinnia, dandelion, aster, pollen, pollination, shoots, germination, seed coat, full grown, parachutes.

Parts of a plant: shoot, sprout, pod, sepal, stem, ovules, stamens, root, pistal, pollen

**Pre-K Literacy: Plants Are All Around Us!**  
**Task Administration Details**

## How Plants Grow

### Literacy – Reading and Writing

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#### PREPARING STUDENTS

Now get ready to become Botanists! Prior to reading the informational text, create tangible classroom experiences that connect to the content on plants in the book. Provide opportunities for students to relate to, connect to, and generate conversations. For example:

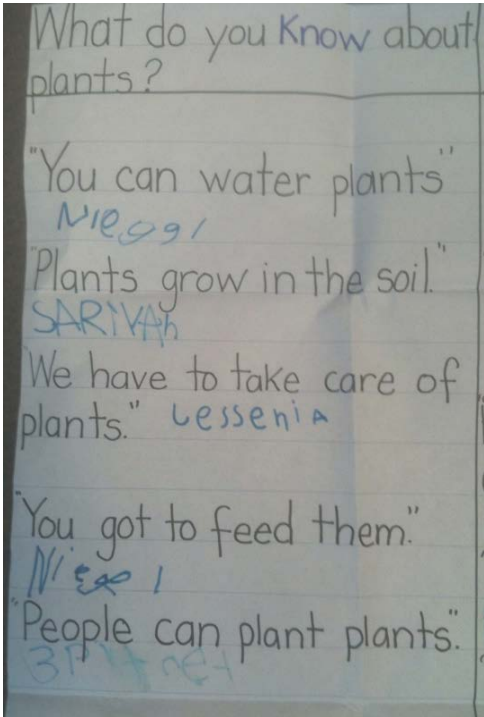
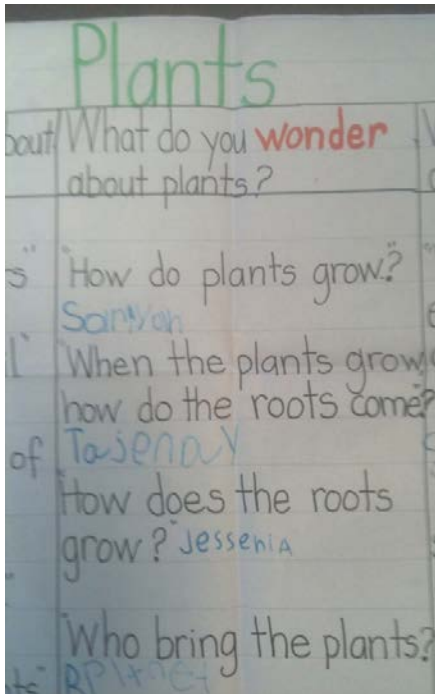
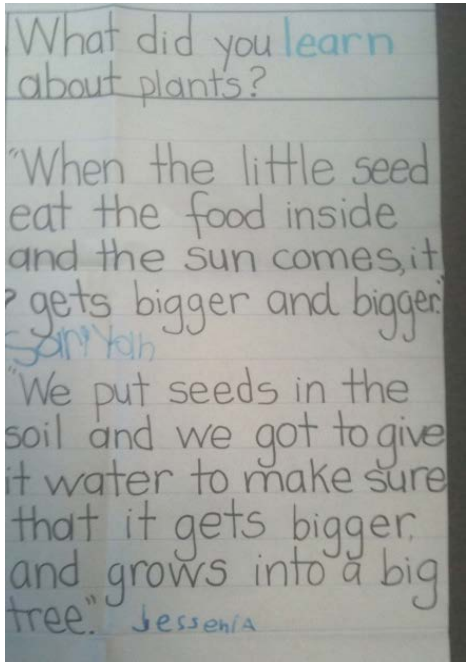
- Go on a neighborhood walk with clipboards, writing tools, and magnifying glasses to examine plants. Create a classroom mural about the plants you observe.
- Using a projector or document camera to enlarge images of plants from books, magazines, or photographs to introduce new vocabulary words to students. Always integrate students' native languages when introducing new words.
- Hang visual representations of plants with labels around your classroom to create a print-rich environment connected to unit.
- Plant seeds in a jar and chart the growth of plants using different tools for measurement. For example, measure plants using Unifix cubes, string, or pencils.
- Observe plants with magnifying glasses and identify the different parts of plant. Help students make text-to-real world connections after reading From Seed to Plant by Gail Gibbons.
- Invite a gardener to your classroom to speak with students about how plants grow.
- Introduce a variety of plant seeds in specimen jars or in plastic bags at center time. Encourage students to draw and discuss what they notice about the size and shapes of seeds.
- Use a KWL chart to engage students in a discussion about what they already know and wonder about plants prior to reading the book (see below).

# Pre-K Literacy: Plants Are All Around Us!

## Task Administration Details

### Facilitator Guidelines for Using a Know, Wonder, Learn Chart:

- Create a chart with three columns to document what students know, wonder and learned about plants and help organize their thoughts.
- Before you read From Seed to Plant, ask students what they know and wonder about plants.
- Use this opportunity to introduce some vocabulary words that they'll experience in the text.
- Next, read the informational text and discuss what they learned about plants from the book.
- You may want to alter the chart to reflect the kind of questioning you've been doing with your students. For example, ask what they noticed on a walk.

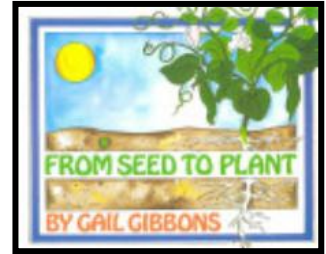
What do you KNOW about plants?	What do you WONDER about plants?	What did you LEARN about plants?
 <p>What do you know about plants?</p> <p>"You can water plants" <i>Mieo 1</i></p> <p>"Plants grow in the soil." <i>SARIVAH</i></p> <p>"We have to take care of plants." <i>Jessenia</i></p> <p>"You got to feed them." <i>Mieo 1</i></p> <p>"People can plant plants." <i>31/1/21</i></p>	 <p>Plants</p> <p>What do you wonder about plants?</p> <p>"How do plants grow?" <i>Sarivah</i></p> <p>"When the plants grow how do the roots come?" <i>Tasendy</i></p> <p>"How does the roots grow?" <i>Jessenia</i></p> <p>"Who bring the plants?" <i>AP11/1/21</i></p>	 <p>What did you learn about plants?</p> <p>"When the little seed eat the food inside and the sun comes, it gets bigger and bigger." <i>Sarivah</i></p> <p>"We put seeds in the soil and we got to give it water to make sure that it gets bigger, and grows into a big tree." <i>Jessenia</i></p>

## Pre-K Literacy: Plants Are All Around Us!

### Task Administration Details

#### Facilitator Guidelines for an Informational Read Aloud:

- Enlarge the book on the wall with a document camera or projector if possible.
- Explain to students that you will be reading an “informational book on how seeds grow into plants.” This book will provide “real life information, or facts, on how seeds grow into plants.”
- Introduce the front cover of the book and underline the title of the story with your finger from left to right while reading the title, From Seed to Plant.
- State the author/illustrator’s name, “Gail Gibbons.” Briefly explain that this author wrote the words and illustrated the pictures.
- Take a moment to closely examine the front cover. Prompt students to “look closely at the pictures to figure out what the story is about.”
- Start reading the text while pausing to prompt the students with the following:
  - What types of plants do you notice in this picture?
  - What is this part of the plant called? Stem, leaf, root?
  - How do seeds travel?
  - What are some places where seeds fall?
  - What do birds do with seeds?
  - How do plants grow once they land in the soil? What happens first?
- As you read, point to illustrations that connect to the key words listed above. Provide definitions in students’ dominant and heritage languages.
- After the read aloud, chart what students learned about plants from the book under LEARN. Label what they say in response with their names.





## Pre-K Literacy: Plants Are All Around Us!

### Task Administration Details

#### Facilitator Guidelines for Collecting Student Responses to Informational Text:

- Revisit the K-W-L chart and re-read From Seed to Plant by Gail Gibbons with a small group of students (or one-to-one with a student).
- At a table during center time, set-up a variety of drawing and writing materials.
- Encourage students to revisit the book and then prompt students to draw and/or write about what they learned from the book. You may want to include an audio recording or copy of the book From Seed to Plant.
- After each student is complete, prompt him/her to “tell me about your work” and “tell me what you learned from the book.”
- Explain that you’ll write exactly what they say in their own words.
- Write student responses on a separate sheet of paper (see template below).
- Read the responses back to students, pointing to each word as you read.
- You may want to provide students with sentence starters to build academic language and to facilitate conversations.



## Pre-K Literacy: Plants Are All Around Us!

### Task Administration Details

#### Additional Supports for Literacy:

The following are suggestions for adapting this task to meet the individual needs of all the students in your class to participate in this activity.

- Use an enlarged version of the text, either in a big book format or using a document camera to project the book on the wall.
- Encourage students to refer back to the book during the activity following the read aloud. Students may use the illustrations to assist them in memorizing or recalling details and vocabulary.
- Offer additional art materials such as collage paper, paints, and stamps to motivate all students to respond to the informational text on paper.
- If a student does not respond on paper, prompt him/her to tell you about the book and document exactly what he/she says through video, audio, or a written transcription.
- If a student does not verbally annotate his/her work when prompted, explain that you will revisit the work at a later date and go back and prompt the child the next day.
- Encourage a group of children to act out a story about planting in the dramatic play area. Record their actions and responses.
- During the read aloud, create illustrations on chart paper for students to follow the storyline. After the story is complete have students retell story from the beginning to end using the teacher's illustration as a point of reference.
- Encourage students to use their native language during these activities to communicate and clarify unfamiliar concept and meanings.
- Pair English proficient students with ELL students. Other ELL students may benefit from being paired with students with the same native language.
- Offer a variety of writing tools to support children's various motor strengths. For additional information on resources and tools, visit *Therapro* at: <http://www.therapro.com/Handwriting-Grips-and-Tools-C4245.aspx>.

# Pre-K Literacy: Plants Are All Around Us!

## Task Administration Details

### Formative Assessment

**Questions for Students:** These questions have various Depth of Knowledge (DOK) levels to provide multiple entry points for all students. Write a list of questions to ask students during the read aloud and document how students respond to the questions.

- Do you have plants at home? Do you help care for them? How do you care for them?
- What do you notice in this picture?
- What are the colors of the plants growing here?
- What is this part of the plant called? Stem, leaf, root?
- What do you think will happen next?
- What types of plants do you notice in this picture?
- What do seeds grow into?
- How do seeds travel?
- Where do seeds fall?
- How do animals help seeds grow?
- What do birds do with seeds?
- How do plants grow once they land in the soil?
- How do people help seeds grow?
- What types of plants do seeds grow into?
- What do people do with full grown plants?

**Questions for Teacher Reflection:** As you document students' processes and performance in this task and reflect on your notes, consider the following:

- Did the student recall previous experiences with plants when prompted?
- What kind of information did the student share about plants prior to reading the text?
- Did the student appear engaged in the whole group read aloud? In what ways?
- Did the student interact with the book after the whole group read aloud: one-to-one with the teacher/ with a small group of students/ independently?
- Did the student engage in a discussion about plants with the teacher and/or peers?
- Did the student demonstrate new information about plants from the book? In what ways?

**Pre-K Literacy: Plants Are All Around Us!**  
**Task Administration Details**

**APPENDIX**

- A: Scoring Rubric**
- B: Student Work Template**
- C: Teacher's Notes**

**Pre-K Literacy: Plants Are All Around Us!**  
**Task Administration Details**

**SCORING RUBRIC**

Not Yet	In Process		Proficient
With prompting and support, the student does not express knowledge, information, and/or ideas from the text through drawing, writing, or dictation.	With prompting and support, the student makes purposeful marks on paper that resemble letter-like symbols and/or drawings, but the meaning attached is not directly related to the information in the text.	With prompting and support, the student is observed and documented clearly expressing knowledge, information, and/or ideas related to the text, but did not participate in a response on paper with prompting and support.	With prompting and support, the student uses a combination of drawing, dictation and/or emergent writing to express knowledge, information, and/or ideas from the text.

**Pre-K Literacy: Plants Are All Around Us!**  
**Task Administration Details**

**Student Work Template:**

Draw about what you learned about plants from the book.

**Pre-K Literacy: Plants Are All Around Us!**  
**Task Administration Details**

**Student Dictation Notes:**

After the student is finished, prompt: "Tell me about your work."

Transcribe exactly what the student says in response in the space below. Do not paraphrase.

**Teacher Notes:**

Include your observation notes about the student's process. Ask questions to increase understanding of student's work; document the question and responses below.

**Rubric Rating:**



# PRE-K LITERACY: PLANTS ARE ALL AROUND US! UNIVERSAL DESIGN FOR LEARNING (UDL) PRINCIPLES



## **Plants – ELA Pre-Kindergarten Common Core Learning Standards/ Universal Design for Learning**

The goal of using Common Core Learning Standards (CCLS) is to provide the highest academic standards to all of our students. Universal Design for Learning (UDL) is a set of principles that provides teachers with a structure to develop their instruction to meet the needs of a diversity of learners. UDL is a research-based framework that suggests each student learns in a unique manner. A one-size-fits-all approach is not effective to meet the diverse range of learners in our schools. By creating options for how instruction is presented, how students express their ideas, and how teachers can engage students in their learning, instruction can be customized and adjusted to meet individual student needs. In this manner, we can support our students to succeed in the CCLS.

Below are some ideas of how this Common Core Task is aligned with the three principles of UDL; providing options in representation, action/expression, and engagement. As UDL calls for multiple options, the possible list is endless. Please use this as a starting point. Think about your own group of students and assess whether these are options you can use.

**REPRESENTATION:** *The “what” of learning.* How does the task present information and content in different ways? How do students gather facts and categorize what they see, hear, and read? How are they identifying letters, words, or an author's style?

*In this task, teachers can...*

- ü **Provide physical objects and spatial models to convey perspective by** having students plant seeds and observe their growth in the classroom.

**ACTION/EXPRESSION:** *The “how” of learning.* How does the task differentiate the ways that students can express what they know? How do they plan and perform tasks? How do students organize and express their ideas?

*In this task, teachers can...*

- ü **Provide sentence starters or sentence strips** to prompt students to ‘show and explain’ their responses for their drawing/writing tasks.

**ENGAGEMENT:** *The “why” of learning.* How does the task stimulate interest and motivation for learning? How do students get engaged? How are they challenged, excited, or interested?

*In this task, teachers can...*

- ü **Provide feedback that encourages perseverance, focuses on development of efficacy and self-awareness, and encourages the use of specific supports and strategies in the face of challenge** by listening to, and communicating with, students on their drawing/writing tasks.

Visit <http://schools.nyc.gov/Academics/CommonCoreLibrary/default.htm> to learn more information about UDL.



## PRE-K LITERACY: PLANTS ARE ALL AROUND US!

### ANNOTATED STUDENT WORK

Student work collections in pre-k are concrete representations of student performance and thinking across the Common Core State Standards and curriculum. In order to articulate student performance and thinking across the standards, teachers annotate student work to provide more information on what, when, where, and how a task took place. Annotated student work tells us something unique about the students and his/her approach to learning. Some suggestions for annotations include factual observations notes on students engaged in the task, reflection notes and discussions with students and teacher reviewing and monitoring notes.

Pre-K Literacy: Plants Are All Around Us!  
Annotated Student Work

# How Plants Grow

## Literacy – Reading and Writing

### SAMPLE STUDENT WORK

#### Student Sample A: *Isabella*

The student's illustration represents information from the text on how rain and sunlight help a seed grow.

The informational text states that a seed must be on or in the soil in order to sprout.



The illustration represents parts of a plant described in the text: roots, stem, leaves and petals.

#### Student Dictation Notes:

Isabella, 6/15/11:

"I put the seed inside the dirt and then the sun comes up. Then the seed grows and then there's a rose."

#### Teacher Observation Notes:

From Seed to Plant was read to the whole class and reviewed the next day in small groups. Isabella pointed to the pink flower and told me she was going to draw that flower. We reviewed some of the names of the flowers in the book, and she recalled the name "rose." Isabella chose not to write any letters or words on her picture.

#### Rubric Rating:

Proficient

# Pre-K Literacy: Plants Are All Around Us! Annotated Student Work

## Student Sample B: *Adrian*

Student's Illustration and dictation (below) demonstrate information from the text on how seeds fall to the ground, where they grow into "flowers."



The illustration represents the parts of a plant described in the text: roots, stem, leaves petals and the ground.

Student demonstrates emergent writing and pointed to the words when telling about his picture.

### Student Dictation Notes:

Adrian, 6/14/11:  
"This is the seeds that landed in the dirt. They grow into flowers of different colors. I drew butterflies here."

### Teacher Notes:



Adrian tends to draw and sometimes writes letters/symbols around his pictures. When he discusses his work he points to the letters to tell me what it says.

### Rubric Rating:

Proficient

# Pre-K Literacy: Plants Are All Around Us!

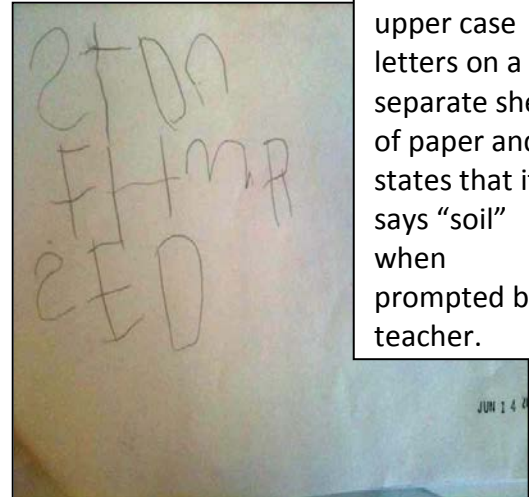
## Annotated Student Work

### Student Sample C: Zariyah

Student's drawing is



Student writes upper case letters on a separate sheet of paper and states that it says "soil" when prompted by teacher.



#### Student Dictation Notes:

6/14/11

Zariyah: "These are um, um flowers and those are the eggs, that um the eggs that flew away from these. This is the sun and the wind is coming so the sun is going down so the rain can come."

Teacher: "And what happens when the rain comes?"

Zariyah: "Everything mess up; the park mess up and the flowers mess up."

Teacher: "What happens when the rain comes down?"

Zariyah: "Everyone has to go home but the flowers have to stay outside so they can grow."

Teacher: "What makes them grow?"

Zariyah: "Water."

Teacher: "Ok, so when it rains is that water that comes down?"

Zariyah (nodding head up and down): "Ummm..."

Teacher: "And is water good for the plants?"

Zariyah: "Yes."

Teacher: "And what else did you write about in your picture? You wrote some words."

Zariyah pointed and said, "Soil. This is the soil right here, you can call it dirt."

Teacher asks if she wanted say what she wrote: "I wrote this...I know how to spell it blew in the wind."

#### Teacher Notes:

Zariyah needed continuous prompting and support to stay on task. Her pictures have some markings that represent some of the content in the story, but, when prompted, she included events and information that is not related to text. She is beginning to write letters to spell out words.

#### Rubric Rating:

In Process

**Pre-K Literacy: Plants Are All Around Us!**  
**Annotated Student Work**

**Student Sample D: *Gabriel***



The student's drawing includes emergent writing, including his name and some capital letters.

**Student Dictation:**

Gabriel, 6/14/11: "I made a snail and he was trying to find a plant and he couldn't find one..."

**Teacher Notes:**

When prompted, Gabriel created a story that was unrelated to the informational text. He continued with a story about a snail, but I could not document all of his words. There was no information or storyline about a snail in the text; Gabriel may have used his prior knowledge about plants in his drawing.

**Rubric Rating:**

In Process

**Pre-K Literacy: Plants Are All Around Us!**  
**Annotated Student Work**

**Student Sample E: *Britney***

**(No Documented Sample)**

<b>Student Dictation:</b>
None
<b>Teacher Notes:</b>
Britney sat on the carpet during the read aloud of <i>From Seeds to Plants</i> by Gail Gibbons. Britney did not participate in the whole group discussion on the K-W-L chart, and did not draw or write about the book when prompted.
<b>Rubric Rating:</b>
Not Yet





# PRE-K LITERACY: PLANTS ARE ALL AROUND US!

## INSTRUCTIONAL SUPPORTS

The instructional supports on the following pages include a unit outline with formative assessments and suggested learning activities. This interdisciplinary unit is to be used in correlation with the curriculum embedded Common Core-aligned task for mathematics, *How Many Little Seeds?*



# Unit Outline –Pre-K Literacy/Math

**INTRODUCTION:** This unit outline provides an example of how teachers may integrate performance tasks into a unit. *Teachers may (a) use this unit as it is described below; (b) integrate parts of it into a currently existing curriculum unit; or (c) use it as a model or checklist for a currently existing unit on a different topic.*

## Pre-Kindergarten Unit: *Plants*

### UNIT TOPIC AND LENGTH:

- Students will explore plants, including their attributes and growth cycle, over the course of one month or longer. This unit on plants consists of 6 sequenced learning plans. Each activity or learning plan works best with a small group of 4-5 students, in centers, over the course of one week each. Duration of student engagement in tasks will vary, but the recommendation is 20 minutes or less per student.

### COMMON CORE LEARNING STANDARDS:

#### ELA & Literacy: Reading

- PK.RI.1: With prompting and support, ask and answer questions about details in a text.
- PK.RI.10: With prompting and support, actively engage in group reading activities with purpose and understanding.

#### ELA & Literacy: Writing

- PK.W.2: With prompting and support, use a combination of drawing, dictating, or writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

#### Mathematics: Counting and Cardinality

- PK.CC.4: Count to answer “how many?” questions about as many as 10 things arranged in a line, a rectangular array, or a circle, or as many as 5 things in a scattered configuration; given a number from 1-10, count out that many objects.

#### Mathematics: Operations and Algebraic Thinking

- PK.OA.1: Demonstrates an understanding of addition and subtraction by using objects, fingers, and responding to practical situations (e.g. if we have 3 apples and add two more, how many do we have?).

#### Mathematics: Measurement and Data

- PK.MD.1: Identify measurable attributes of objects, such as length, and weight. Describe them using correct vocabulary. (e.g. small, big, short, tall, empty, full, heavy, and light.)

### BIG IDEAS/ENDURING UNDERSTANDINGS:

- We can learn about plants by exploring nature and reading informational books on

### ESSENTIAL QUESTIONS:

- What is a plant?
- How do the parts of plants help us identify them?

## Unit Outline –Pre-K Literacy/Math

<p>plants.</p> <ul style="list-style-type: none"> <li>➤ Plants have parts with names.</li> <li>➤ We can measure, add, subtract, and count the parts of a plant.</li> <li>➤ Plants require specific conditions and care to grow.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Why is it important to take care of plants? How many more seeds do we need?</li> <li>➤ What do you notice about how plants grow?</li> <li>➤ How can we measure the growth of these plants?</li> </ul>
<p><b>CONTENT:</b></p> <ul style="list-style-type: none"> <li>➤ <b>Plant Facts</b> <ul style="list-style-type: none"> <li>▪ Plants in the local environment</li> <li>▪ Basic Parts of Plants: stem, leaf, root, seed, flower)</li> <li>▪ Care of Plants in different environments</li> </ul> </li> <li>-----</li> <li>➤ <b>Informational Text</b> <ul style="list-style-type: none"> <li>▪ Texts that provide facts on plants</li> <li>▪ Details from text that provide the needed information</li> <li>▪ Images and media that provide information</li> </ul> </li> <li>-----</li> <li>➤ <b>Math Operations</b> <ul style="list-style-type: none"> <li>▪ 1 to 1 correspondence</li> <li>▪ Adding/Subtracting Plant Parts</li> <li>▪ Counting Plant Parts</li> </ul> </li> <li>-----</li> <li>➤ <b>Math Data</b> <ul style="list-style-type: none"> <li>▪ Measurable Attributes used as the way botanists describe plants: observation as scientists</li> </ul> </li> </ul>	<p><b>SKILLS:</b></p> <ul style="list-style-type: none"> <li>➤ <b>Explore and observe</b> plants in the local environment.</li> <li>➤ <b>Identify</b> parts of plants. (i.e. stem, leaf, root, seed, flower, etc.)</li> <li>➤ <b>Draw</b> plants and plant parts.</li> <li>➤ <b>Describe</b> the role of a botanist as scientist; observer and caretaker of plants.</li> <li>➤ <b>Develop and implement</b> a plan to take care of classroom and school plants</li> <li>-----</li> <li>➤ <b>Comprehend</b> non-fiction picture books to learn about plants.</li> <li>➤ <b>Recognize and explain</b> that books provide information and facts on living things, such as plants.</li> <li>➤ <b>Articulate</b> what is known and what is wondered about plants.</li> <li>➤ <b>Identify</b> important details from read-aloud texts.</li> <li>-----</li> <li>➤ <b>Explore then describe</b> how to add and subtract seeds and other plant parts to get a total number.</li> <li>➤ <b>Count</b> to answer how many plants or plant parts.</li> <li>➤ <b>Demonstrate</b> one to one correspondence by matching numeral to number of plant parts.</li> <li>-----</li> <li>➤ <b>Identify</b> measurable attributes of plants. (i.e. small, big, short, tall, etc.)</li> </ul>
<p><b>VOCABULARY/KEY TERMS:</b></p> <p><b><u>Tier 1</u></b></p> <p>Seed, plant, flower, powder, wind, insects, juice, bees, ground, birds, eat, water, dirt, wings, spin, fall, animals, people, clothes, leaves, green, sun, rice, black, paper, rain, night, morning, eat, line, more, less, enough, fewer</p>	

# Unit Outline –Pre-K Literacy/Math

## **Tier 2**

Shape, size, color, different, grow, grows, kind, parts, begin, many, itself, land, top, bottom, blows, itself, sweet, rubs, onto, off, fruit, die, bigger, protects, ripens, breaks, ready become, fall, base, open, pop, berries, streams, ponds, rivers, ocean, travel, stick, shore, scatters, float, parachutes, hide, acorns, nuts, hooks, fur, drop, onto, flower bed, vegetable garden, beautiful, envelopes, boxes, directions, explain how care for, beginning, seed coat, curled, inside, each, stored, outside, protect, soak, soften, certain, things happen, first, on, in, too, root, stems, shines, warms, sunlight, air, all, finally, new, tasty, raise, clean, glass, jar, wedge, between, slide, fill, find, piece, roll it up, construction paper, place, few, days, begin, down, watch, while, clay, pot, scientists, study, heat, forest fire, live, season, desert, mountain, short, shut, live, island, weigh, pounds, feet, across, tomato, squash, all together, number

## **Tier 3**

Tulip, daisy, rose, pea, buttercup, corn, oak tree, apple tree, zinnia, dandelion, aster, petal, stigma, pistil, stamens, sepal, stem, egg cell, ovules, sticky, pollen, pollination, grain, land, hummingbirds, nectar, tube, pod, fluff, sprout, germination, breaks open, minerals, full grown, buds, nutrition, vitamins, shoots, botanists, annuals, perennials, cactus, Sumatra, venus flytrap, rafflesia plant, violet add, addition, subtract, subtraction, total, sum

**Math Language Functions:** combine, take away, explain

## **ASSESSMENT EVIDENCE AND ACTIVITIES:**

### **INITIAL ASSESSMENT :**

- Prompt students to share what they already know about plants, making connection to real life experiences.
- Document student observations while on a nature walk; ask questions about what they wonder.
- After a whole group read aloud on plants, discuss and document the details they learned from the book.
- Dictate student responses on chart paper or on a Know-Wonder-Learn chart. Write the students' names next to their responses.
- Identify and differentiate between different plants and parts of a plant by their measurable attributes. If a student will not share aloud in a whole group setting, prompt the student one to one.
- Introduce a variety of plant seeds in plastic specimen jars or plastic bags. Encourage students to sort by size and/or shape and to draw what they notice about the seeds. Document their process and ask mathematical questions.
- Introduce counting and subtracting while singing a song about seeds. Document students' performance as they sing the song, follow hand movements, and countdown using fingers.

### **FORMATIVE ASSESSMENT:**

- Demonstrate solutions to plant related pre-mathematical concepts including adding and subtracting of seeds or beans.
- Identify and differentiate between different plants and plant parts by their measurable attributes.

### **FINAL PERFORMANCE TASK:**


- Encourage students to use a combination of drawing, dictating, or writing to provide details about what

# Unit Outline –Pre-K Literacy/Math

they learned from an informational text about plants (*See Literacy Task, “How Plants Grow”*).

- Demonstrate solutions to plant-related mathematical concepts by adding and subtracting seeds or beans (*See Math Task, “How Many Little Seeds?”*).

## EXTENSION:

Create a class Storybird at:  [Storybird- Web 2.0 Application for Sharing Observations and Stories](#)

Children work in small groups of three or four to devise a plan to take care of classroom plants in a Web 2.0 application, such as Storybird. Children work together to develop strategies to ensure that each plant will receive the proper care and placement in the classroom. Students monitor the plant's growth in the classroom over a three to four week period and, with prompting and support, detail their work on the visual chart.

Teachers can document the process through observation notes, pictures, and videos of students engaged in the development of their plan.

## LEARNING PLAN & ACTIVITIES:

Week 1: *How plants grow!* A neighborhood walk and literacy task with and informational text provide students with an introduction to plants.

Week 2: *Let's observe the sprout!* Planting seeds to observe and track the growth cycle of a plant.

Week 3: *How many little seeds?* A mathematical game with addition & subtraction

Week 4: *Parts of plants:* Measure and graph how tall a stem is, and explore which ones have grown leaves, buds, or blossoms. What do the parts of a plant do to help it live and grow?

Week 5: *Plants help us grow big and strong too.* Plants are a healthy food that we need to eat every day. Let's try different plants as food and choose our favorite.

Week 6: *Class trip to a garden.* Visit the local community garden (i.e. Brooklyn Botanical Garden or New York Botanical Garden) to learn more about plants and living things that grow.

## RESOURCES

### WEBSITES:

- [Eartheasy.com](http://eartheasy.com/grow_gardening_children.htm) ([http://eartheasy.com/grow\\_gardening\\_children.htm](http://eartheasy.com/grow_gardening_children.htm)) --Tips and resources on what to plant for young gardeners...
- [New York Botanical Garden](http://www.nybg.org/edu/) (<http://www.nybg.org/edu/>) --Children's gardening program information at the New York Botanical Gardens
- [Brooklyn Botanical Garden](#) -- Information about the Brooklyn Botanic Garden Educational Program
- [United States Department of Agriculture](http://www.bbg.org/discover/gardens/childrens_garden/) ([http://www.bbg.org/discover/gardens/childrens\\_garden/](http://www.bbg.org/discover/gardens/childrens_garden/))-- A database on national plants.
- [Lowes' Gardening with Young Children](http://www.lowes.com/cd_Gardening+with+Children_1272982901) ([http://www.lowes.com/cd\\_Gardening+with+Children\\_1272982901](http://www.lowes.com/cd_Gardening+with+Children_1272982901)) -- Benefits of gardening with children, what to plant and safety in the garden.

# Unit Outline –Pre-K Literacy/Math

- [Teacher's College Press](http://www.tcpres.com/) (<http://www.tcpres.com/>) -- A free downloadable Project Planning Journal from *Young Investigators* by Judy Harris Helm and Lilian Katz; a free download
- [Storybird](http://storybird.com/) (<http://storybird.com/>) --Web 2.0 application for sharing observations and stories
- Home Depot/kidsgardening.org (<http://kidsgardening.org/sponsors/homedepot>)—Youth Garden Grants sponsor
- National Gardening Association:: Grants and Awards ([assoc.garden.org/grants/](http://assoc.garden.org/grants/)) - Programs will receive gift cards to Home Depot and Gardening with Kids

## CHILDREN'S BOOKLIST:

From Seed to Plants by Gail Gibbons: A simple introduction to growth from seed to plant.

From Seed to Sunflower by Gerald Legg: Large illustration and simple text present the life cycle of a sunflower.

Oh Say Can You Seed? All About Flowering Plants by Bonnie Worth: The Cat in the Hat examines various parts of plants seeds and flowers; basic photosynthesis and pollination.

The Reason for a Flower by Ruth Heller: Brief text and lavish illustrations explain plant reproduction and the purpose of a flower.

The Tiny Seed by Eric Carle: The story of a small seed that starts with other seeds on a journey from a flower to its very own spot.

The Dandelion Seed by Joseph Anthony: The story describes the journey of a little dandelion seed.

City Green by DyAnne DiSalvo-Ryan: Marcy transforms an abandoned lot by planting sunflowers. The last page explains how to start a neighborhood community garden.

Flower Garden by Eve Bunting: In an urban neighborhood a girl and her father by flowers at a grocery store and plant a window box.

Fran's Flower by Lisa Bruce: A little girl learns about the foods that nurture a plant.

Jack's Garden by Henry Cole: A cumulative story that traces a little boy's backyard flower garden from tilling the soil to enjoying the blossoms.

The Maybe Garden by Kimberly Burke-Weiner: A little girl envisions the garden of her dreams. It is nothing like the garden her mother enjoys.

Planting a Rainbow by Lois Ehlert: A mother and her child plant bulbs in the fall, order seeds in the winter, anticipate the first shoots in spring, select seedlings in the summer and watch a rainbow of colors grow.

Sunflower House by Eve Bunting: Lyrical rhyming text about planting sunflowers.

Sunflower Sal by Janet S. Anderson: A little girl finds peace and success in growing hundreds of sunflowers throughout her village.

# Unit Outline –Pre-K Literacy/Math

The Little Red Hen by Lucinda McQueen

## **Children's Alphabet and Number Books:**

Alison's Zinnia by Anita Lobel

Counting Wildflowers by Bruce McMillan

The Flower Alphabet Book by Jerry Pallotta

## **TEACHER RESOURCES:**

Chalfour, Ingrid & Worth, Karen. (2003). *Discovering Nature with Young Children: A pre-school nature curriculum designed to guide children's learning through open and focused science explorations*. St. Paul, MN: Red Leaf Press

Midden, Karen, Olthof, Marla & Starbuck, Sara (2002). *Hollyhooks and Honeybees: Garden Projects for Young Children*. St. Paul, MN: Red Leaf Press

Neumann-Hinds, Carla. (2007). *Picture Science: Using digital Photography to Teach Young Children*. St. Paul, MN: Red Leaf Press

Sangliolo, Maria. (2011). *Maria and Friends-Planting Seeds*. CD. Amazon.com



## PRE-K LITERACY: PLANTS ARE ALL AROUND US! SUPPORTS FOR ENGLISH LANGUAGE LEARNERS

# GRADE PRE-K LITERACY: PLANTS ARE ALL AROUND US!

## Unit: Responding to Informational Texts

**Pre-Reading:** Using authentic experiences, pre-teach new vocabulary that will be encountered in the text *From Seed to Plant*. This can occur in a variety of ways, including the following:

- Provide visual representations to create a print-rich environment by taking pictures of task-related realia during neighborhood nature walks and post them with labels in the classroom. Also, the parts of the plants in the classroom should be labeled.
- Provide opportunities for students to relate, connect, and generate oral conversations in English and/or the native language to build oral proficiency. Upload pictures in order to create interactive slideshows through the use of a Smartboard, an LCD projector, etc.
- Provide realia for students to observe and interact with in order to address different learning styles and link to real life experiences. Such hands-on interactions can include identifying different plants they observed, sorting and finding different types of seeds, planting seeds and observing their growing cycles, and observing existing plants in the classroom.
- Activate prior knowledge by asking students about their experiences with plants or inviting them to bring in one item from home which is derived from a plant. This activity will generate academic discussion and prepare them for learning.
- Provide small group and individual activities to reinforce learning by creating flashcards for new vocabulary either in paper or electronic form with visuals. Teachers should integrate students' native languages when creating flashcards whenever possible.
- Use different graphic organizers along with the learning tasks (such as the one on the next page) to encourage inventive spelling, and develop and reinforce vocabulary. You may alter the graphic organizer to reflect the kind of questioning you have been doing with your students. For example, you can ask them what they noticed or what they saw.
- All of the activities above will culminate in the completion of the "Know" portion of the KWL.
- Provide students with sentence starters in order to complete the "Wonder" portion of the KWL, such as
  - I wonder if....?
  - What...?
  - Why...?
- Use media (e.g., videos) in order to create meaningful connections for Tier II and Tier III words, such as *botanists*, *germinate* and *flower bed*.
- Use Turn-and-Talk with a focus question during the activity to build students' verbal skills.



**This is a \_\_\_\_\_.**

Draw a picture of it

#### **During Reading:**

- Use a Think-Pair-Share activity when asking students to infer from the text.
- Pair students strategically as some ELL students can benefit from being paired with English proficient students. Other ELL students may benefit from being paired with students with the same native language.
- Allow students to use their native languages during these activities to communicate and clarify unfamiliar concept and meanings.
- Provide students with sentence starters to build academic language and to facilitate conversations among them. The language in which sentence starters are introduced may vary for individual students and teachers must strategically plan according to students' English proficiency levels.
- Allow students to label and draw on Post-its during these interactions, which will allow for inventive spelling. Point when students are unable to produce language orally.

#### **Post-Reading**

- Encourage students to refer back to the book during the activity following the read aloud. Students may use the illustrations to assist them in memorizing or recalling details and vocabulary.
- Be sure the text is enlarged, in big book format, or on an interactive screen in order to facilitate connection between the text (print) and the student learning.

- Give students a menu of activities which pertain to the text during center time on day 2 based on their English language proficiency levels. Such activities can include, but should not be limited to, the following:
  - Create a reenactment using Total Physical Response (TPR) of the life cycle of a plant.
  - Create a graphic organizer allowing students to illustrate steps of the life cycle of a plant.
  - Provide students with illustrations of the different stages of a plant's life and allow them to arrange the stages in sequence.
- Plan targeted instruction and group students strategically according to their needs.
- Provide various activities by creating centers and rotate them frequently.
- Record students' responses and provide positive feedback while working in small groups.
- Model language consistently; repeat and reinforce as necessary.
- Allow students to illustrate what was transcribed by the teacher.
- Ask students to trace the words in the transcribed sentence.
- Provide additional reading materials around the same concept/theme in the child's native language; such reading materials should also be culturally responsive.



## PRE-K LITERACY: PLANTS ARE ALL AROUND US!

### SUPPORTS FOR STUDENTS WITH DISABILITIES

# PRE-K LITERACY: PLANTS ARE ALL AROUND US!

## Instructional Supports for Students with Disabilities using UDL Guidelines

### **Background Information**

Learners differ in the ways that they perceive and comprehend information and may require a different process to acquire the same content. In addition, learners may differ markedly in the ways they engage, maintain attention to task and demonstrate what they know and have learned. Hence, the goal of a UDL curriculum is the interrelated components which comprise the goals, methods, materials and assessment.

### **Day 1: PREPARING STUDENTS**

***Activate or supply background knowledge through multi-sensory approach. Provide Multiple Means of Representation to assess students' prior knowledge***

***Provide options for perception-Offer ways of customizing the display of information***

- Use color coding to document their responses on a K-W-L chart, or blank chart paper. Involve all learners by prompting or requiring them to restate the task in order to be able to better internalize information and extrapolate the most important details.

What do you <b>KNOW</b> about planting?	What do you <b>WONDER</b> about planting?	What did you <b>LEARN</b> about planting?

***Provide options for executive functioning-Enhance capacity for monitoring progress***

- Create cooperative learning groups, encouraging children to prepare their responses and build consensus in pair-share or small flexible groups for the **KNOW** and **WONDER** segments of the chart.
- Provide prompts, reminders and ground rules/management plans that reduce the frequency of off-task behaviors in response to struggles or low stamina, as appropriate.
- Provide instruction by modeling and by assigning mentors, both designed to support the range of attention, cognition, sensory and language strengths and challenges in the classroom.

***Provide options for self-regulation-Facilitate personal coping skills and strategies***

- Provide non-verbal options for self-regulation for students when they assemble for group activities:
  - permission to assemble on the rug
  - relocate to a chair around a table
  - take a short “stretch”

- be excused for other appropriate actions
- Provide options for purposeful transitions:
  - Refer students to individual schedules
  - Provide sign-out/sign-in books
  - Wall schedule
  - Musical tones as prompts

***Provide options for comprehension-Highlight patterns, critical features, big ideas, and relationships***

- Provide feedback and models for incorporating positive strategies for success, e.g., group leaders to facilitate the K-W-L by providing the color coded markers for the different components of the charting process.

***Provide options for language, mathematical expression and symbols-Clarify vocabulary***

- Show short videotaped segments of the class trip where students walked around the block and observed different types of plant life in the neighborhood. Use segments to facilitate recall and retention through visual reinforcement and repetition. Stop periodically to discuss vocabulary.

## **Day 2: INFORMATIONAL READ ALOUD**

**Suggested Text:** *From Seed to Plant* by Gail Gibbons

**Suggested Read Aloud Time:** 15 minutes

***Provide options for recruiting interest- Optimize relevance, value and authenticity***


- ***Establish clear expectations for group work.*** Post class-created rubric where all students can view.
- ***Illustrate through multiple media,*** Use a Document Reader or Smart Board to display and underline the title of the story from the cover of the book using your finger or Smart Board marking instrument from left to right while reading the title, “From Seed to Plant.”
- ***Provide models or examples of the process and product.*** Read aloud and chunk information, think and talk aloud “real life information, or facts, on how plants grow from seeds.” Stop periodically to chart student responses onto graphic organizer, flow chart or Thinking Map(s) posted where all students can view.
- ***Enhance capacity for monitoring progress.*** Establish rituals and routines that prompt learners to identify the type of feedback, advice, and/or assistance they require.
- ***Establish clear protocols for class discussions:*** whole group; small groups; think-pair-share; and turn and talk.

- **Increase mastery-oriented feedback.** While students are listening to classmates make and back-up a plant-life fact, process or prediction; periodically select students to retell, sketch or elaborate to monitor comprehension.

#### **Provide options for perception-Offer alternatives for auditory information**

- Offer the students the opportunity to view the author's name "Gail Gibbons" on the cover of the book. Briefly explain that the author writes the book. Show other examples around the classroom by asking students to find books and point to the author's name.
- Offer the students the opportunity to view the illustration on the front cover of the book. Briefly explain that an illustrator creates the pictures. Using same book, have students point to the illustrator.
- Display the illustration using a document reader, prompting the children to predict what the story might be about. Use flexible groups for pair-share and discuss.
- If available, utilize an FM system to decrease distractions from extraneous/ambient noise.
- Offer children preferred seating, as appropriate.
- Repeat auditory prompts and encourage children to echo your questions, e.g., "What do you notice in this picture?" Differentiate by:
  - Prompting students to formulate a new question for a classmate.
- Avoid word call questions. Pointing to illustrations, ask students "Do you see a stem?" "Can you come up and point to the stem?" "Echo me...STEM" Continue this process for "leaf" and "root."

#### **Provide options for comprehension-Activate or supply background knowledge**

- Anchor instruction by linking to and activating relevant prior knowledge
- Allow one or two students to model for the class
- Ask children to predict, "What do you think would happen if nobody watered the plants?"
- Prepare word cards for the following key words: water, dig, seed, stem, root, leaf. Place Velcro strips on the back of the cards  As you read, point to illustrations that connect to the key words listed above. Provide definitions in students' dominant and heritage languages.

### **Provide multiple means of action and expression-Provide options for physical action**

- Ask children to act-out the process of planting a seed in the dirt as they repeat your verbalizations, e.g., “First we dig a hole.” “Then we put seed in the hole.” “Next we cover the seed with dirt.” “Finally, we pour water on top.”

### **Provide options for perception-Offer alternatives for visual information**

- After the read aloud, chart what students learned about plants from the book under **LEARN**. Use illustrations/sketches/clip art to correspond to the concepts/vocabulary/actions on the Chart.

### **Provide options for language, mathematical expressions and symbols- Illustrate through multi media**

- Show a short video of the steps portrayed in the text to present the relationships between the planting events. Ask students to tell what they learned in their own words, using the Key Word Cards.

## **Day 3: WRITTEN RESPONSE TO INFORMATIONAL TEXT**

### **Provide options for recruiting interest-Minimize threats and distractions**

- When revisiting the K-W-L chart the following day, use flexible grouping to assemble students. Allow individual attention as appropriate. Use a pointer to re-read and echo-read *From Seed to Plant* by Gail Gibbons

### **Provide options for recruiting interest –Optimize individual choice and autonomy**

- Offer children choices to increase the degree to which they feel connected to their learning. The right kind of choice and level of independence must be optimized to ensure engagement. Set-up a variety of drawing and writing materials, an audio book recording, the video seed planting vignette, Key Word Cards and a copy of the book *From Seed to Plant*. Encourage students to revisit the story.

### **Provide options for sustaining effort and persistence-Foster collaboration and community**

- Prompt students to draw and/or write about what they learned from the book. A teacher should be present at the table to create cooperative learning groups with clear goals, roles and responsibilities. Provide prompts that guide learners in when and how to ask peers and/or teacher(s) for assistance. Encourage and support opportunities for peer tutors and construct communities of learners engaged in common activities.

### **Provide options for sustaining and persistence- Increase mastery-oriented feedback.**

- After each student finishes, prompt him/her to “tell me about your work” and “tell me what you learned from the book.” As the teacher explain that the student’s response will be written exactly what they say in their own words, provide feedback that emphasizes the role of effort and practice

rather than intelligence or inherent ability as an important factor in guiding learners toward successful long-term habits and learning practices.

**Provide options for self-regulation-Develop self assessment and reflection**

- Write the student responses on a separate sheet of paper (see template below). Read the responses back to students, pointing to each word as you read. Offer devices, aids or charts to assist students to collect, chart or display data from their own behavior. Facilitate a discussion related to the amount of learning or work accomplished on Day 3. Compare to previous mastery oriented feedback in a portfolio.